

REMARKS

Status of the Application

This amendment is submitted with a request for a two-month extension of time and the requisite fee.

Claims 1-35 were pending. The Office Action rejected claims 1-35. By way of this amendment, claims 1-3, 6-8, 16, 22, 24, 30, 31 and 34 are amended. Also, claim 15 is canceled and new claim 36 is added. Thus, claims 1-14 and 16-36 are now pending.

Amendments to Claims 2, 3, 6-8, 22 and 34

Claims 2, 3, 6-8, 22 and 34 have been amended to broaden and/or change the scope of these claims. Applicants respectfully submit that these amendments are not narrowing and have not been made for reasons of patentability.

Claim Rejections

Claims 1-35 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent Application Pub. No. 2003/0004418 to Marmorstein (hereinafter “Marmorstein”). In light of the amendments, reconsideration is respectfully requested.

With regard to claim 1, it now recites, *inter alia*, “an excitation light source adapted to provide an excitation light that maximizes the excitation of flavoprotein auto-fluorescence and minimizes the excitation of non-flavoprotein auto-fluorescence.”

Marmorstein does not disclose or suggest this element.

Marmorstein describes an apparatus that directs light at an eye and detects autofluorescent emissions at a plurality of detectably distinct wavelengths. In particular, Marmorstein describes detecting autofluorescent emissions of two of Bruch’s membrane, drusen, and lipofuscin within the retinal pigmented epithelium (RPE). Then, an amplitude of the RPE lipofuscin emission and an amplitude of the Bruch’s membrane emission, for example, are calculated at each of a plurality of different positions in the eye. Next, corresponding ratios of the RPE lipofuscin amplitudes and the Bruch’s membrane amplitudes at the different positions of the eye are determined. Finally, it is determined if ratios in

regions of the macula exceed ratios from other regions of the eye, which may indicate macular degeneration. *See Marmorstein* at pars. 0018-0020, 0033.

Marmorstein does not discuss autofluorescence of flavoproteins and does not disclose or suggest maximizing the excitation of autofluorescence of flavoproteins. Rather, Marmorstein teaches that Bruch's membrane autofluorescence emissions, RPE lipofuscin autofluorescence emissions, or drusen autofluorescence emissions should be measured. Thus, Marmorstein also does not disclose or suggest minimizing excitation of non-flavoprotein auto-fluorescence. On the contrary, Marmorstein teaches that Bruch's membrane, RPE lipofuscin, and drusen autofluorescence emissions, which are non-flavoprotein auto-fluorescence emissions, are important and should be measured (i.e., they should not be minimized). As a result, Marmorstein does not disclose or suggest "an excitation light source adapted to provide an excitation light that maximizes the excitation of flavoprotein auto-fluorescence and minimizes the excitation of non-flavoprotein auto-fluorescence" as recited in claim 1.

At least for these reasons, Marmorstein does not anticipate claim 1.

At least for reasons similar to those discussed above with respect to claim 1, Marmorstein does not anticipate independent claims 16 and 30.

Claims 17-23 and 25-29 depend from claim 16. At least for the same reasons as claim 16, Marmorstein does not anticipate these claims.

Claims 32-35 depend from claim 30. At least for the same reasons as claim 30, Marmorstein does not anticipate these claims.

Referring again to claim 1, it now recites the following combination of elements: "an excitation light source adapted to provide an excitation light that maximizes the excitation of flavoprotein auto-fluorescence and minimizes the excitation of non-flavoprotein auto-fluorescence; and an image capture device ... including a filter adapted to maximize the passage of flavoprotein auto-fluorescence and attenuate non-flavoprotein auto-fluorescence in the retina fluorescence signal." Marmorstein does not disclose or suggest this combination of elements. At least for this additional reason, Marmorstein does not anticipate claim 1.

As discussed above, Marmorstein describes detecting autofluorescent emissions of Bruch's membrane, RPE lipofuscin, or drusen. Table I and Figs. 4, 5 and 6 of Marmorstein show that varying the excitation wavelength causes the wavelength of autofluorescent emissions of Bruch's membrane, RPE lipofuscin, and drusen to vary. For example, if an excitation wavelength of 364 nm is used, autofluorescent emissions of Bruch's membrane will have a peak at 485 nm, whereas if an excitation wavelength of 488 nm is used, autofluorescent emissions of Bruch's membrane will have a peak at 540 nm. *See Marmorstein* at Table 1. Thus, Marmorstein teaches that the emission wavelengths to be analyzed depend on the wavelength of the excitation source, and that the combination of excitation wavelength and emission wavelengths to be analyzed are chosen to detect autofluorescent emissions of Bruch's membrane, RPE lipofuscin, or drusen.

Marmorstein does not disclose or suggest detecting or measuring flavoprotein auto-fluorescence, or that flavoprotein is desirable to detect or measure. Rather, Marmorstein describes measuring autofluorescent emissions of Bruch's membrane, RPE lipofuscin, or drusen, and teaches that the combination of excitation wavelength and emission wavelengths is chosen to optimize detection of these non-flavoprotein auto-fluorescence emissions. Thus, Marmorstein does not disclose or suggest the following combination of elements recited in claim 1: "an excitation light source adapted to provide an excitation light that maximizes the excitation of flavoprotein auto-fluorescence and minimizes the excitation of non-flavoprotein auto-fluorescence; and an image capture device ... including a filter adapted to maximize the passage of flavoprotein auto-fluorescence and attenuate non-flavoprotein auto-fluorescence in the retina fluorescence signal." At least for this additional reason, Marmorstein does not anticipate claim 1.

At least for reasons similar to those discussed above with respect to claim 1, Marmorstein does not anticipate claims 24 and 31.

Claims 2-14 and 36 depend from claim 1. At least for the same reasons as claim 1, Marmorstein does not anticipate these claims.

Conclusion

In view of the above amendment, Applicants believe the pending application is in condition for allowance.

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Respectfully submitted,

By 

Gregory E. Stanton

Registration No.: 45,127

MARSHALL, GERSTEIN & BORUN LLP

233 S. Wacker Drive, Suite 6300

Sears Tower

Chicago, Illinois 60606-6357

(312) 474-6300

Attorney for Applicant